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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,613	03/29/2001	Ian Anthony Jones	Q90170	3061

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EXAMINER
ELVE, MARIA ALEXANDRA

ART UNIT	PAPER NUMBER
1793	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/806,613	JONES ET AL.	
	Examiner	Art Unit	
	M. Alexandra Elve	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-8,10,13-21,26,27,29,30 and 62-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-8,10,13-21,26,27,29,30 and 62-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/30/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The amendment filed 12/20/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "dissolved".

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 21 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Muellich (USPN 5,893,959).

Muellich discloses a workpiece composed of at least two parts (7, 8) of plastic, preferably a thermo-plastic, welded together by laser beams (11) along a joining zone (10).

Applicant's claim recitations regarding the method of forming a product, relate only to the method of producing a part of the claimed product, which does not impart patentability to the product claims. Note that determination of patentability on the product itself, In re Brown 173 USPQ 685, 688 and In re Fessmann 180 USPQ 324, and the patentability of a product does not depend on its method of production, In re Pilkington 162 USPQ 145, 147; see also In re Thorpe 227 USPQ 964 (CAFC 1985). Note that it is Applicant's burden to prove that an unobvious difference exists, In re Marosi 218 USPQ 289, 292-293 (CAFC 1983), and Applicant must show that different methods of manufacture produce articles having inherently different characteristics, *Ex parte Skinner* 2 USPQ 2d 1788.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-8, 10, 13-20, 26-27, 29, 62 & 68-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrsin (USPN 3,477,194) in view of Andrus et al. (USPN 5,093,147).

Corrsin discloses the sealing of thermoplastic thin materials using infrared radiation and a carbon material in between the materials. The carbon substance is printed onto a board, which is faced or overlaid with a thermoplastic material. The coating and film are welded throughout the area overlying the infrared absorbing material. Absorbers may also be in form of inks (functional equivalent of a dye). Lamps or carbon dioxide lasers can be used. An absorber can be a visually transparent radiation absorber that is selective to radiation in a certain range of wavelengths. Specifically two transparent films or substantially transparent films are sealed together by employing a substantially visually transparent radiation absorber which selectively absorbs radiation in a wavelength range to which the films are transparent, thus causing a concentration in heat in areas where such absorber has been applied and thereby effecting sealing.

Corrsin discloses ink but not specifically a dye.

Andrus et al. discloses an organic dye (ink), which is highly absorptive of radiation in the near infrared range of 750 to 900 nm. Invisible inks may be used and laser dyes, which absorb in the IR range. For invisible inks, the dye should have a low absorption in the visible range of the spectrum. Over the visible range, absorption is the highest (over 700nm) and for the dyes absorption is in the range of 760 to 830 nm.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use an organic dye (ink) as taught by Andrus et al. in the Corrsin system because it is merely a variant of ink (dye) types.

Claims 2-8, 10, 13-20, 27, 29, 62 & 67-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muellich (USPN 5,893,959) in view of Andrus et al.

Muellich discloses the welding of thermoplastic materials using a laser beam. The transmission coefficient is used in the formation of a bond. Workpieces may be opaque, colored with dye or transparent. After welding, the individual workpiece parts are substantially no longer distinguishable by the human eye. The proportions of the workpiece parts are joined in the visible region and dye pigment may be used for joining. Wavelengths of 1.06 um may be used.

Muellich discloses a dye but not an organic type of dye.

Andrus et al. discloses an organic dye (ink), which is highly absorptive of radiation in the near infrared range of 750 to 900 nm. Invisible inks may be used and laser dyes, which absorb in the IR range. For invisible inks, the dye should have a low absorption in the visible range of the spectrum. Over the visible range, absorption is the highest (over 700nm) and for the dyes absorption is in the range of 760 to 830 nm.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use an organic dye (ink) as taught by Andrus et al. in the Muellich system because it is merely a variant of ink (dye) types.

Claims 63-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrsin and Andrus et al., as stated in the above paragraph and further in view of Osborne (USPN 4,069,080).

Corrsin does not specifically teach the use of fabrics/textiles, polyester, fluoropolymer and so forth.

Osborne discloses bonding superposed sheets of polymeric material. A CO2 gas laser is used for welding the plastic materials, as the energy in the beam generated by the laser has wavelengths that are readily absorbed in the thermoplastic materials such as copolymers of vinyl chloride and vinylidene chloride and so forth. It would have been obvious to one of ordinary skill in the art at the time of the invention to sheet material, thermoplastics and so forth because this is merely a design substitution.

The types of materials chosen are a choice in design and substitutions of known equivalent structures may be made. In re Kuhle 188 (CCPA 1975) and In re Ruff 118 USPQ 343 (CCPA 1958). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a fluoropolymer because it is a polymeric substitute.

Claims 26, 30 & 63-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muellich and Andrus et al., as stated in the above paragraph and further in view of Osborne.

Muellich does not specifically teach the use of fabrics/textiles, thin films, polyester, fluoropolymer or thermoplastics.

Osborne discloses bonding superposed sheets of polymeric material. A CO2 gas laser is used for welding the plastic materials, as the energy in the beam generated by the laser has wavelengths that are readily absorbed in the thermoplastic materials such as copolymers of vinyl chloride and vinylidene chloride and so forth. It would have been obvious to one of ordinary skill in the art at the time of the invention to sheet material, thermoplastics and so forth because this is merely a design substitution.

The types of materials chosen are a choice in design and substitutions of known equivalent structures may be made. In re Kuhle 188 (CCPA 1975) and In re Ruff 118 USPQ 343 (CCPA 1958). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a fluoropolymer because it is a polymeric substitute.

Response to Declaration under 37 CFR 1.132

The declaration under 37 CFR 1.132 filed 12/21/06 is insufficient to overcome the rejection of claims 2-8, 10, 13-21, 26-27, 29-30 & 62-74 based upon Corrsin, Andrus et al., Muellich and Osborne as set forth in the last Office action because:

It include(s) statements which amount to an affirmation that the claimed subject matter functions as it was intended to function. This is not relevant to the issue of nonobviousness of the claimed subject matter and provides no objective evidence thereof. See MPEP § 716.

It refer(s) only to the system described in the above referenced application and not to the individual claims of the application. Thus, there is no showing that the

objective evidence of nonobviousness is commensurate in scope with the claims. See MPEP § 716.

Applicant argues that only infrared of 10,600 nm is taught because of the use of a CO2 laser. The examiner respectfully disagrees because 10,600 nm is not disclosed the by the reference and a full IR range is taught. The reference must be read as whole and not just specific embodiments.

Applicant argues that Muellich does not teach the visually transmissive component. The examiner respectfully notes that Andrus teaches the visually transmissive part. In addition Andrus teaches HCITCI cyanine dye with an invisible ink. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Corrsin teaches a polubutadiene which only in the 10,600nm range. The examiner respectfully disagrees because the 10,600 nm range is not disclosed. In addition Corrsin teaches thermoplastics. The reference must be read as whole and not just specific embodiments.

Applicant argues that Corrsin discloses gypsum and this is not transparent. The examiner respectfully notes that Corrsin discloses other radiation absorbers in addition to the gypsum. The reference must be read as whole and not just specific embodiments. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the

rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In view of the foregoing, when all of the evidence is considered, the totality of the rebuttal evidence of nonobviousness fails to outweigh the evidence of obviousness.

Response to Amendment

The amendment filed 12/20/07 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: “dissolved”. There is no basis in applicant’s specification or originally presented claims which references dissolved or dissolving.

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Arguments

Applicant's arguments filed 12/20/07 have been fully considered but they are not persuasive.

Applicant argues that Muellich does not teach the product. The examiner respectfully disagrees because: Muellich discloses a workpiece composed of at least

two parts (7, 8) of plastic, preferably a thermo-plastic, welded together by laser beams (11) along a joining zone (10). The claim and the reference have essentially the same processing.

Applicant's claim recitations regarding the method of forming a product, relate only to the method of producing a part of the claimed product, which does not impart patentability to the product claims. Note that determination of patentability on the product itself, In re Brown 173 USPQ 685, 688 and In re Fessmann 180 USPQ 324, and the patentability of a product does not depend on its method of production, In re Pilkington 162 USPQ 145, 147; see also In re Thorpe 227 USPQ 964 (CAFC 1985). Note that it is Applicant's burden to prove that an unobvious difference exists, In re Marosi 218 USPQ 289, 292-293 (CAFC 1983), and Applicant must show that different methods of manufacture produce articles having inherently different characteristics, *Ex parte Skinner* 2 USPQ 2d 1788.

Applicant argues that EPO document shows that the prior art does not read on the claims. The examiner appreciated applicant's submission of the decision document, however, the EPO has a different orientation on patentability than the US. Thus the rejection of claim 21 over Muellich is sustained.

Applicant argues that the Examiner misunderstood the reason of the submission of the declaration. The examiner respectfully disagrees and The declaration under 37 CFR 1.132 filed 12/21/06 is insufficient to overcome the rejection of claims 2-8, 10, 13-21, 26-27, 29-30 & 62-74 based upon Corrsin, Andrus et al., Muellich and Osborne as set forth in the last Office action.

Applicant argues that Corrsin discloses carbon, polybutadiene and gypsum which are not radiation absorbing in the range cited in the claims and do not exhibit the visually transmissive property. The examiner respectfully disagrees because Corrsin teaches the use of thermoplastics, not just polybutadiene. In addition, the use of infrared is taught; it is well known that this range (IR) is from 750nm to 1mm. Thus Corrsin does teach the range of instant claims. With respect to visually transmissive, Andrus discloses a cyanine dye with an invisible ink. Andrus states that the laser dyes are invisible to the unaided eye and maybe used in clear ink vehicles. Invisible inks have low absorption in the visible range and high absorbance outside that range. Thus the visually transmissive property is taught, albeit by Andrus. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Corrsin teaches carbon, which is not visually transmissive. The examiner respectfully notes that Andrus teaches an invisible ink vehicle with invisible laser dyes. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Corrsin teaches gypsum and this is not visually transmissive. The examiner respectfully notes that Andrus teaches an invisible ink vehicle with invisible laser dyes. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Corrsin discloses a range of 1000 to 3000nm, which would partially overlap the claimed range, but the radiation absorber is not visually transmissive and therefore does not suggest a radiation absorbing dye. The examiner respectfully notes that Corrsin discloses IR radiation (750nm to 1mm) and discloses radiation-absorbing materials (carbon and so forth). With respect to visually transmissive, this is taught by Andrus. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that polybutadiene, as taught by Corrsin, does not absorb IR radiation. The examiner respectfully notes that Corrsin teaches not only polybutadiene but also thermoplastics. The reference must be read as whole and not just specific embodiments.

Applicant argues that Corrsin discloses 10,600nm absorption. The examiner respectfully disagrees, 10,600 nm is not disclosed in Corrsin, the IR range, however, is disclosed.

Applicant argues that Andrus does not teach the welding of thermoplastics. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Muellich does not teach visually transmissive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 7:30-4:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1742. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

March 2, 2008.

/M. Alexandra Elve/
Primary Examiner, Art Unit 1793